Volume 76 1977

Table of Contents

No. 1 pp. 1–316 issued on June 1, 1977
No. 2 pp. 317–626 issued on June 15, 1977

1 Subunit Structure of the Methionine-Repressible Aspartokinase II—Homoserine Dehydrogenase II from *Escherichia coli* K12
A. Dautry-Varsat, L. Sibilli-Weill, and G. N. Cohen

7 Regulation of ATP Pools, rRNA and DNA Synthesis in 3T3 Cells in Response to Serum or Hypoxanthine
F. Grummt, D. Paul, and I. Grummt

13 An Analysis of the Bovine Genome by Density Gradient Centrifugation: Fractionation in Cs_2SO_4/3,6-Bis (acetatomercurimethyl)dioxane Density Gradient
J. Cortadas, G. Macaya, and G. Bernardi

21 Particle-Bound Enzymes in the Bloodstream Form of *Trypanosoma brucei*
F. R. Opperdoes, P. Borst, and H. Spits

29 Localization of Glycerol-3-Phosphate Oxidase in the Mitochondrion and Particulate NAD^+-Linked Glycerol-3-Phosphate Dehydrogenase in the Microbodies of the Bloodstream Form of *Trypanosoma brucei*
F. R. Opperdoes, P. Borst, S. Bakker, and W. Leene

41 Isolation of Mutants Conditionally Blocked in the Biosynthesis of the 3-Deoxy-D-*manno*-octulosonic-acid—Lipid-A Part of Lipopolysaccharides Derived from *Salmonella typhimurium*
V. Lehmann, E. Rupprecht, and M. J. Osborn

51 A Trypsin-Resistant Fragment from Complexes of Ribosomal Protein S4 with 16-S RNA of *Escherichia coli* and from the Uncomplexed Protein
V. Newberry, M. Yaguchi, and R. A. Garrett

63 Transcription of Superhelical DNA from Cell Nuclei
A. Colman and P. R. Cook

79 Nickel Cytochrome c. Effect of Protein Moiety on the Metal Ion Coordination
M. C. Findlay and J. C. W. Chien

85 The Major Polypeptides of the Murine-Mammary-Tumor Virus Isolated by Plant-Lectin Affinity Chromatography
F. Westenbrink, W. Koornstra, and P. Bentvelzen

91 Analysis of the *relA* Gene Product of *Escherichia coli*
F. S. Pedersen and N. O. Kjeldgaard

99 Snake Venom Toxins. The Amino-Acid Sequence of a Short-Neurotoxin Homologue from *Dendroaspis polylepis polylepis* (Black Mamba) Venom
D. J. Strydom

107 Purification and Characterization of Human Hypoxanthine/Guanine Phosphoribosyltransferase
H. Muensch and A. Yoshida

113 Diacylglycerol Acyltransferase from Rat Liver Microsomes. Separation and Acyl-Donor Specificity
K. Hosaka, U. Schiele, and S. Numa

119 Characterization of a Protein Factor Stimulating RNA Synthesis by DNA-Dependent RNA Polymerase II from Plant Cell Cultures
G. Link and G. Richter

129 Primary Structure of the B-Chain of Human Plasmin
B. Wiman

139 On the Structure of Flavin-Oxygen Intermediates Involved in Enzymatic Reactions
S. Ghisla, B. Entsch, V. Massey, and M. Husein

149 Investigation into the Occurrence and Structure of Lectin Receptors on Human and Bovine Erythrocyte, Milk-Fat Globule and Lymphocyte Plasma-Membrane Glycoproteins
R. A. Newman and G. G. Uhlenbruck

157 Increased *de Novo* Pyrimidine Nucleotide Synthesis in Liver Induced by Ammonium Ions in Amounts Surpassing the Urea Cycle Capacity
J. G. Pausch, D. O. R. Keppler, and W. Gerok

165 The Organisation of Genes for Transfer RNA and Ribosomal RNA in Amoebae and Plasmodia of *Physarum polycephalum*
L. Hall and R. Braun

175 The Use of Formaldehyde in RNA-Protein Cross-linking Studies with Ribosomal Subunits from *Escherichia coli*
K. Möller, J. Rinke, A. Ross, G. Buddle, and R. Brimacombe

189 Characterisation of RNA Fragments Obtained by Mild Nuclease Digestion of 30-S Ribosomal Subunits from *Escherichia coli*
J. Rinke, A. Ross, and R. Brimacombe

197 The Purification and Properties of 4-Hydroxyisophthalate Hydroxylase from *Pseudomonas putida* NCIB 9866
E. A. Elmorsi and D. J. Hopper

209 Puromycin and Some of Its Analogues: Conformational Properties in Solution. A 360-MHz Nuclear-Magnetic-Resonance Investigation
H. P. M. de Leeuw, J. R. de Jager, H. J. Koeners, J. H. van Boom, and C. Altona

219 Pyruvate Carboxylase: Effect of Reaction Components and Analogues of Acetyl-Coenzyme A on the Rate of Inactivation in the Presence and Absence of Trinitrobenzene Sulphonate
M. C. Scrutton, P. H. Pearce, and F. Fatebene

233 Specific Casein Phosphorylation by a Casein Kinase from Lactating Bovine Mammary Gland
A. G. Mackinlay, D. W. West, and W. Manson

245 A Phosphorus-Magnetic-Resonance Study of the Interaction of Mg^{2+} with Adenyl-5′-yl Imidodiphosphate. Binding Sites of Mg^{2+} Ion on the Phosphate Chain
S. Tran-Dinh and M. Roux

251 A Comparative Analysis of the Protein Components of Plasma Membranes Isolated from Differentiated and Undifferentiated Mouse Neuroblastoma Cells in Tissue Culture
J. H. Garvican and G. L. Brown

263 On the Stereochemistry of Activation of Phenylalanine by Phenylalanyl-tRNA Synthetase from Baker's Yeast
F. von der Haar, F. Cramer, F. Eckstein, and K.-W. Stahl

269 Protein-Bound Adenosine 3′:5′-Monophosphate in Liver of Glucagon-Treated Rats. Determination of Half-Maximal Binding *in vivo* and Correlation with Protein Kinase Activation
G. Schwoch and H. Hilz

277 On the Interrelationship of Prostaglandin Endoperoxide G_2 and Cyclic Nucleotides in Platelet Function
H.-E. Claesson and C. Malmsten

285 Immunochemical Evidence for the Difference between Coenzyme-B_{12}-Dependent Diol Dehydratase and Glycerol Dehydratase
T. Toraya and S. Fukui

291 Factors Influencing the Apparent Molecular Weight of Collagenase Produced by Human-Skin Explants
C. Fiedler-Nagy, J. W. Coffey, and R. A. Salvador

299 The Action of Lysozyme on Peptidoglycan with *N*-Unsubstituted Glucosamine Residues. Isolation of Glycan Fragments and Their Susceptibility to Lysozyme
K. Amano, H. Hayashi, Y. Araki, and E. Ito

309 Activity of Protein Kinase Dependent on Adenosine 3′:5′-Monophosphate and of Its Thermostable Protein Inhibitor in Rat Hepatoma (HTC) Cells. Unlikely Role in the Permissive Action of Glucocorticoids
G. G. Rousseau

317 Purification and Characterization of the Lytic Enzyme *N*-Acetylmuramyl-L-alanine Amidase of Bacteriophage T7
G. Kleppe, H. B. Jensen, and I. F. Pryme

327 Structural Studies of the *Shigella flexneri* Variant X, Type 5a and Type 5b O-Antigens
L. Kenne, B. Lindberg, K. Petersson, E. Katzenellenbogen, and E. Romanowska

331 Dinucleosidetriphosphatase from Rat Liver. Purification and Properties
M. A. G. Sillero, R. Villalba, A. Moreno, M. Quintanilla, C. D. Lobatón, and A. Sillero

339 The Effect of Macromolecular Polyanions on the Functional Properties of Human Hemoglobin
G. Amiconi, L. Zolla, P. Vecchini, M. Brunori, and E. Antonini

345 Identification of an Intramitochondrially Synthesized Proteolipid Associated with the Mitochondrial ATPase Complex as the Product of a Mitochondrial Gene Determining Oligomycin Resistance in *Aspergillus nidulans*
M. A. Marahiel, G. Imam, P. Nelson, N. J. Pieniażek, P. P. Stepień, and H. Küntzel

355 Binding of Polylysine to Chromatin Subunits and Cleavage by Micrococcal Nuclease. A Comparison of Accessible Sites
D. Doenecke

365 The Functional Role of Thiol Groups in Protease-Solubilized NADPH—Cytochrome *c* Reductase from Pork-Liver Microsomes
T. Lazar, H. Ehrig, and L. Lumper

373 Macromolecular Synthesis and Energy Level in a Mitochondrial Conditional Yeast Mutant, *tsm*-8
W. Bandlow, R. Metzke, A. Klein, K. Kotzias, I. Doxiadis, H. Bechmann, R. J. Schweyen, and F. Kaudewitz

383 Characterization of Stable Conformational States in Urea-Induced Transition in Ovomucoid
A. Waheed, M. A. Qasim, and A. Salahuddin

391 Immobilised Lipoamide Dehydrogenase. 1. Preparation and Properties of the Enzyme Immobilised by Disulphide Interchange
C. R. Lowe

401 Immobilised Lipoamide Dehydrogenase. 2. Properties of the Enzyme Immobilised to Agarose through Spacer Molecules of Various Lengths
C. R. Lowe

411 Immobilised Lipoamide Dehydrogenase. 3. Preparation and Properties of an Immobilised Polythiolated Enzyme
C. R. Lowe

419 Effect of Rifampicin on the Infectivity of RNA Bacteriophage f2
P. Naimski and J. Chroboczek

425 The *recBC* Enzyme of *Escherichia coli* K12: Premature Cessation of Catalytic Activities *in vitro* and Reactivation by Potassium Ions
U. Hermanns and W. Wackernagel

433 Somatic Antigens of *Shigella*. Structural Investigation on the O-Specific Polysaccharide Chain of *Shigella Dysenteriae* Type-2 Lipopolysaccharide
B. A. Dmitriev, Y. A. Knirel, N. K. Kochetkov, I. L. Hofman, and K. Čapek

441 The Genetic Control of Molybdoflavoproteins in *Aspergillus nidulans*. A Xanthine Dehydrogenase I Half-Molecule in *cnx*$^-$ Mutant Strains of *Aspergillus nidulans*
N. J. Lewis and C. Scazzocchio

447 Comparative Study of the Effect of 5′ AMP and Its Analogs on Rabbit Glycogen Phosphorylase *b* Isoenzymes
D. Guénard, M. Morange, and H. Buc

453 2-O-(β-D-Glucuronyl)-7-O-(2-amino-2-deoxy-α-D-glucopyranosyl)-L-*glycero*-D-*manno*-heptose: a Constituent of the *Bordetella pertussis* Endotoxin
R. Chaby, M. Moreau, and L. Szabó

461 The Primary Structure of a Non-histone Chromosomal Protein
J. M. Walker, J. R. B. Hastings, and E. W. Johns

469 On the Mechanism of Action of Soybean Lipoxygenase-1. A Stopped-Flow Kinetic Study of the Formation and Conversion of Yellow and Purple Enzyme Species
M. R. Egmond, P. M. Fasella, G. A. Veldink, J. F. G. Vliegenthart, and J. Boldingh

481 Purification and Characterization of the Phosphorylated DNA-Binding Protein from Adenovirus-Type-2-Infected Cells
T. Linné, H. Jörnvall, and L. Philipson

491 Water-Soluble Glycosphingolipids of Dog Gastric Mucosa. Characterization of a Branched Ceramide Heptasaccharide
A. Slomiany and B. L. Slomiany

499 Studies on the Retinal-Protein Interaction in Bacteriorhodopsin
T. Schreckenbach, B. Walckhoff, and D. Oesterhelt

513 The Allosteric Inhibition by Calcium of Soluble and Partially Purified Adenylate Cyclase from Turkey Erythrocytes
E. Hanski, N. Sevilla, and A. Levitzki

521 Ca-Regulation of Mammalian Smooth Muscle Actomyosin *via* a Kinase-Phosphatase-Dependent Phosphorylation and Dephosphorylation of the 20000-M_r Light Chain of Myosin
J. V. Small and A. Sobieszek

531 Alterations of Activities of Ribonucleases and Polyadenylate Polymerase in Synchronized Mouse L Cells
W. E. G. Müller, H. C. Schröder, J. Arendes, R. Steffen, R. K. Zahn, and K. Dose

541 Release of Interferon-Induced Translation Inhibition by tRNA in Cell-Free Extracts from Mouse Erythroleukemia Cells
U. Mayr, H.-P. Bermayer, G. Weidinger, C. Jungwirth, H. J. Gross, and G. Bodo

553 The Adenine-Nucleotide Exchange in Submitochondrial (Sonic) Particles
M. Klingenberg

567 Gluconeogenesis in the Guinea Pig. Effect of Glucagon on Gluconeogenesis from Lactate by Isolated Perfused Guinea-Pig Liver
D. E. Cook

573 Nuclear-Magnetic-Resonance-Spectroscopic Studies of the Amino Groups of Insulin
J. H. Bradbury and L. R. Brown

583 Characterization of a Soluble Simian-Virus-40 Transcription Complex
P. Gariglio and S. Mousset

591 Studies of the Topography of the Binding Site of DNA-Dependent RNA Polymerase from *Escherichia coli* for the Antibiotic Rifamycin SV
W. Stender and K. H. Scheit

601 Determination of the *syn-anti* Equilibrium of Some Purine 3′:5′-Nucleotides by Nuclear-Magnetic-Relaxation Perturbation in the Presence of a Lanthanide-Ion Probe
G. V. Fazakerley, J. C. Russell, and M. A. Wolfe

607 Nitrosoalkanes as Fe(II) Ligands in the 455-nm-Absorbing Cytochrome *P*-450 Complexes Formed from Nitroalkanes in Reducing Conditions
D. Mansuy, P. Gans, J.-C. Chottard, and J.-F. Bartoli

617 Nitrosoalkanes as Fe(II) Ligands in the Hemoglobin and Myoglobin Complexes Formed from Nitroalkanes in Reducing Conditions
D. Mansuy, J. C. Chottard, and G. Chottard

625 Corrections

Indexed in Current Contents